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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,428	07/05/2005	Toshio Okuyama	2005-1080A	7704

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EXAMINER

PRAKASAM, RAMYA G

ART UNIT	PAPER NUMBER
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3651

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,428	<b>Applicant(s)</b> OKUYAMA ET AL.	
	<b>Examiner</b> Ramya G. Prakasam	<b>Art Unit</b> 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment filed on 9/28/06 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

#### ***Claim Rejections - 35 USC § 112***

3. Claims 18-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding claim 18, the phrase "rod-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

#### ***Claim Rejections - 35 USC § 102***

5. Claims 18-19, 21-23, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Ravn (U.S. Patent No. 3,623,594).

Ravn discloses a discharge device for discharging elongated products each having one end that is larger in size than the other end, the discharge device comprising:

- ❑ A hopper (20) having an opening portion at a bottom portion thereof (See Figure 2);
- ❑ A driving mechanism (50) for swaying the hopper about a rotation center axis, wherein the opening portion of the hopper extends in a direction of the rotation center axis (See Figure 2); and
- ❑ A bottom cover closing the opening portion of the hopper so that rod-like products do not escape therefrom (72), wherein

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- The bottom cover has an upper surface (74) closing the opening portion of the hopper and a slit (24) extending in a direction perpendicular to a direction of the swaying motion of the hopper so as to be open in the upper surface (See Figure 2);
- The bottom cover is profiled so that the elongated products cannot escape from the opening portion of the hopper (See Figure 2);
- The slit has a width that allows all but the maximum outer size portion of the elongated products to pass therethrough (See Figure 2 – at a point, all but the outer size portion passes therethrough), and;
- The driving mechanism is operable to sway the hopper so that the opening portion of the hopper moves along the upper surface of the bottom cover to thereby guide the elongated products, accommodated in the hopper, into the slit of the bottom cover (See Column 1, lines 72-75 and Column 2, lines 1-30).
- A vibrator (50) for vibrating the bottom cover, wherein the bottom cover is vibrated to discharge the elongated products from the slit (See Column 2, lines 43-64).
- Wherein the hopper has a flat bottom plate (See Figure 2).
- Wherein the hopper has a bottom plate that is inclined toward the opening portion (See Figure 2).
- Wherein the opening portion of the hopper has a width that is narrower than a bottom portion of the hopper (See Figure 1).

Ravn further discloses a discharge device for elongated products each having one end that is larger in size than the other end, the discharge device comprising:

- A hopper (20) having an opening portion in a bottom portion thereof (See Figure 2);
- A driving mechanism (50) for swaying the hopper about a rotation center axis, wherein the opening portion extends along a direction of the rotation center axis (See Figure 2);
- A bottom cover closing the opening portion of the hopper so that the elongated products do not escape therefrom (72); and
- Inclination plates (74) connected at the opening portion of the hopper such that end edges of the inclination plates are positioned close to an upper surface of the bottom cover (See Figure 2); wherein:
  - The upper surface of the bottom cover closes the opening portion of the hopper and the upper surface is profiled so that the elongated products cannot escape from the opening portion of the hopper and a slit (24) is formed in the upper surface so as to extend in a direction perpendicular to a direction of the swaying motion of the hopper (See Figure 2),
  - The slit is sized to permit all but the maximum outer size portion of the elongated products to pass therethrough (See Figure 2) and
  - The driving mechanism is operable to sway the hopper so that the opening portion of the hopper moves along the upper surface of the bottom cover to thereby guide the elongated products from the hopper into the slit of the bottom cover (See Column 1, lines 72-75 and Column 2, lines 1-30).

***Claim Rejections - 35 USC § 103***

6. Claims 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravn in view of Kitamura (U.S. Patent No. 6,334,527).

Ravn discloses all claimed limitations, except for a discharge device

- ❑ Wherein the upper surface of the bottom cover takes a profile in conformity with a circular arc so that the elongated products do not escape from the opening portion of the hopper.
- ❑ wherein the swaying motion of the hopper has a maximum inclination angle of 5 to 60 degrees.

Kitamura discloses a discharge device

- ❑ wherein the upper surface of the bottom cover takes a profile in conformity with a circular arc (See Figure 17) for the purpose of swinging the hopper in a pendulum fashion (See Column 10, lines 6-18)
- ❑ wherein the swaying motion of the hopper has a maximum inclination angle of 5 to 60 degrees (See Column 1, lines 46-50) for the purpose of continuously loading products (See Column 1, lines 53-55).

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify Ravn by utilizing a device:

- ❑ wherein the upper surface of the bottom cover takes a profile in conformity with a circular arc for the purpose of swinging the hopper in a pendulum fashion.
- ❑ wherein the swaying motion of the hopper has a maximum inclination angle of 5 to 60 degrees for the purpose of continuously loading products.

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7. Claims 26-27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravn in view of Laquay (U.S. Patent No. 6,488,449).

Ravn discloses all claimed limitations, except for a discharge device:

- ❑ Wherein in the hopper, rubber-like elastic bodies are fixed at the opening portion of the hopper so as to be close to the bottom cover.
- ❑ Wherein in the hopper, rubber-like elastic bodies are fixed at the opening portion of the hopper and the rubber-like elastic bodies is defined to have a width in which the end edges thereof get close to the slit when the hopper is inclined.
- ❑ Wherein in the hopper, inclinations plates are fixed to the opening portion and elastic bodies are connected to the inclination so that the end edges of the inclination plates get close to the bottom cover using the elastic bodies.

Laquay discloses a discharge device:

- ❑ Wherein in the hopper, rubber-like elastic bodies (3) are fixed at the opening portion of the hopper (See Figure 1) for the purpose of suspending articles and creating a longitudinal stop (See Abstract)
- ❑ Wherein in the hopper, rubber-like elastic bodies (3) are fixed at the opening portion of the hopper and the rubber-like elastic bodies is defined to have a width in which the end edges thereof get close to the slit when the hopper is inclined (See Figure 1) for the purpose of forming a stop having an abutment forming longitudinal face (See Abstract)
- ❑ Wherein in the hopper, inclinations plates (5b) are fixed to the opening portion and elastic bodies (3) are connected to the inclination so that the end edges of the

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inclination plates get close to the bottom cover using the elastic bodies for the purpose of creating a box that will retain an article (See Column 5, lines 19-32).

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify Ravn by utilizing a discharge device:

- ❑ Wherein in the hopper, rubber-like elastic bodies are fixed at the opening portion of the hopper for the purpose of suspending articles and creating a longitudinal stop;
- ❑ Wherein in the hopper, rubber-like elastic bodies are fixed at the opening portion of the hopper and the rubber-like elastic bodies is defined to have a width in which the end edges thereof get close to the slit when the hopper is inclined for the purpose of forming a stop having an abutment forming longitudinal face;
- ❑ Wherein in the hopper, inclinations plates are fixed to the opening portion and elastic bodies are connected to the inclination so that the end edges of the inclination plates get close to the bottom cover using the elastic bodies for the purpose of creating a box that will retain an article.

8. Claims 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravn in view of Konrad (U.S. Patent No. 6,079,593).

Ravn discloses all claimed limitations, except for a device wherein:

- ❑ The elongated products are pipet tips and each of the pipet tips includes a flange,
- ❑ A removal arm for catching and pulling off one of the pipet tips from the slit, the removal arm being operable to engage the flange of the pipet tip when stacked on a lower one of the pipet tips.



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- ❑ The bottom cover forms an upward inclined slit capable of catching the flange of a pipet tip that is stacked on another pipet tip while being moved in the slit of the bottom cover and raising the stacked pipet tip.

Konrad discloses a device wherein:

- ❑ The elongated products are pipet tips (112) and each of the pipet tips includes a flange (See Figure 8) for the purpose of retaining the pipet tips on the rectangular openings (See Column 4, lines 17-30),
- ❑ A removal arm (133) for catching and pulling off one of the pipet tips from the slit (slit between 111), the removal arm being operable to engage the flange of the pipet tip when stacked on a lower one of the pipet tips (See Figure 12) for the purpose of allowing the pipet to be released from one slit to another (See Column 6, lines 55-62).
- ❑ The bottom cover forms an upward inclined (See Figures 8 and 12) slit capable of catching the flange of a pipet tip that is stacked on another pipet tip while being moved in the slit of the bottom cover and raising the stacked pipet tip (See Figure 12) for the purpose of individually removing each individual pipet tip from the container (See Column 4, lines 17-27).

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify Ravn by utilizing a device wherein:

- ❑ The elongated products are pipet tips and each of the pipet tips includes a flange for the purpose of retaining the pipet tips on the rectangular openings,
- ❑ A removal arm for catching and pulling off one of the pipet tips from the slit, the removal arm being operable to engage the flange of the pipet tip when stacked on a

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lower one of the pipet tip for the purpose of allowing the pipet to be released from one slit to another.

- The bottom cover forms an upward inclined slit capable of catching the flange of a pipet tip that is stacked on another pipet tip while being moved in the slit of the bottom cover and raising the stacked pipet tip for the purpose of individually removing each individual pipet tip from the container.

***Allowable Subject Matter***

9. Claims 25, 29, and 31-32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Claim 5 recites a sway cycle in the range of 0.5 to 10 seconds. Claim 29 recites an inclination mechanism including permanent magnets fixed to opposing portions of the hopper and the removal arm. Claim 31 recites a clearance, which is narrower than twice a thickness of the flange of the pipet tip, which allows the flange of the pipet to pass between a front end of the inclined slit and the bottom cover.

These limitations, in combination with the other limitations of the claims, were not found in the relevant prior art.

***Response to Arguments***

11. Applicant's arguments with respect to claims 18-34 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

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12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

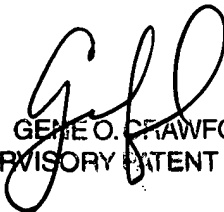
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramya G. Prakasam whose telephone number is (571) 272-6011. The examiner can normally be reached on Monday - Thursday, 8:30am-7pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/7/2006  
RGP

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER